

IN THE CLAIMS:

The following is a complete listing of the claims. This listing replaces all earlier versions and listings of the claims.

Claim 1 (currently amended): An area sensor comprising:

plural pixels, each having a switching element, arranged two-dimensionally; and

plural common lines which are connected to ~~[[said]]~~ the switching elements corresponding to said plural pixels which are arrayed in a direction,

wherein plural driving means, connected to said plural common lines, apply a control signal ~~being applied~~ to said plural common ~~[[line]]~~ lines in order to drive ~~[[said]]~~ the switching element of each of said plural pixels, wherein plural driving means for applying said control signal are connected to said common lines

wherein, in order to allow the plural driving means to be driven at the same time, the plural driving means have a start signal input section for starting the plural driving means.

Claim 2 (currently amended): An area sensor according to claim 1, wherein each of the plural ~~[[said]]~~ driving means is connected to both ends of said plural common ~~[[line]]~~ lines.

Claim 3 (currently amended): An area sensor according to claim 2, wherein said control signal is applied, at the same timing, by each of the plural ~~[[said]]~~ driving means which ~~[[is]]~~ are connected to both ends of said plural common ~~[[line]]~~ lines.

Claim 4 (canceled)

Claim 5 (currently amended): An area sensor according to claim 1, wherein ~~[[said]]~~ each of the switching element elements of said plural pixels is a thin-film transistor, and each of said common ~~[[line]]~~ lines is a common gate line which is connected to the gate of the thin-film transistor.

Claim 6 (currently amended): An area sensor according to claim 5, wherein each of said plural pixels ~~[[pixel]]~~ has a photoelectric conversion element which is connected to ~~[[said]]~~ the thin-film transistor.

Claim 7 (currently amended): An area sensor according to claim 1, wherein a wavelength conversion member is disposed in each of said plural pixels ~~[[pixel]]~~.

Claim 8 (currently amended): An area sensor comprising:  
plural pixels, each having a thin-film transistor and a photoelectric conversion element, arranged two-dimensionally; and  
plural common source lines which are connected to ~~[[the]]~~ source electrodes of ~~[[said]]~~ the thin-film transistors which are arrayed in a direction,  
wherein plural signal reading means are connected to said plural common source lines, and  
wherein signal reading is performed, at the same timing, by the plural signal reading means.

Claim 9 (currently amended): An area sensor comprising:

plural pixels, each having a thin-film transistor and a photoelectric conversion element, arranged two-dimensionally;

plural common gate lines, ~~which are~~ connected to the gate electrodes of ~~[[said]]~~ the thin-film transistors, which are arrayed in one direction; and

plural common lines, ~~which are~~ connected to the source or drain electrodes of ~~[[said]]~~ the thin-film transistors, which are arrayed in another direction,

wherein plural signal reading means are connected to said plural common lines, and plural gate driving means are connected to said plural common gate lines, and

wherein signal reading is performed, at the same timing, by each of the plural signal reading means.

Claim 10 (currently amended): An area sensor according to claim 9,

wherein each of the plural ~~[[said]]~~ signal reading means is connected to both ends of said plural common ~~[[line]]~~ lines.

Claim 11 (currently amended): An area sensor according to claim 9,

wherein ~~[[said]]~~ each of the plural gate driving means is connected to both ends of said plural common gate ~~[[line]]~~ lines.

Claims 12 and 13 (canceled)

Claim 14 (currently amended): An area sensor according to claim 9, wherein ~~[[said]]~~ each of the plural signal reading means is connected to both ends of said plural common ~~[[line]]~~ lines, and ~~[[said]]~~ each of the plural gate driving means is connected to both ends of said plural common gate line.

Claim 15 (canceled)

Claim 16 (currently amended): An area sensor according to claim 14, wherein ~~[[said]]~~ a control signal is applied, at the same timing, by ~~[[said]]~~ each of the plural gate driving means ~~which is connected to both ends of said common gate line.~~

Claim 17 (canceled)

Claim 18 (currently amended): An area sensor according to claim 9, wherein ~~[[said]]~~ each of the thin-film ~~transistor~~ transistors comprises amorphous silicon.

Claim 19 (currently amended): An area sensor according to claim 9, wherein ~~[[said]]~~ each of the photoelectric conversion ~~element~~ elements comprises a material selected from the group consisting of amorphous selenium, lead(II) iodide (PbI<sub>2</sub>), and gallium arsenide.

Claim 20 (currently amended): An area sensor according to claim 9, wherein a wavelength conversion member is disposed in ~~[[said]]~~ each of the photoelectric conversion ~~element~~ elements.

Claim 21 (currently amended): An area sensor according to claim 9, wherein [[said]] each of the plural gate driving means or [[said]] each of the plural signal reading means is anisotropically connected to [[the]] said plural common gate [[line]] lines or [[the]] said plural common source [[line]] lines.

Claim 22 (currently amended): A method of driving an area sensor having plural pixels, each having a switching element, arranged two-dimensionally, and having a pixel sequence in which the switching elements are connected to a common line, said method comprising the steps of:

applying a control signal, from plural driving means, for driving [[said]] the switching elements at the same time from at least two different points of [[said]] the common line; and

driving the switching elements which are connected to [[said]] the common line in accordance with the control signal applied to [[said]] common line,

wherein a start signal from a start input section of the plural driving means is provided in order to allow the plural driving means to be driven at the same time.

Claim 23 (currently amended): A method of driving an area sensor according to claim 22, wherein [[said]] the control signal, which is applied at the same time, has [[the]] a same application time period.

Claim 24 (currently amended): A method of driving an area sensor according to claim 22, wherein [[said]] the control signal which is applied to [[said]] the common line is applied from portions near the ends of [[said]] the common line.

Claim 25 (currently amended): An image input apparatus comprising:

an area sensor having plural pixels arranged ~~therein~~

two-dimensionally, each pixel having a thin-film transistor and a photoelectric conversion element, having plural common gate lines which are connected to the gate electrodes of [[said]] the thin-film transistors arrayed in one direction and plural common lines which are connected to the source or drain electrodes of [[said]] the thin-film transistors arrayed in another direction, having plural signal reading means connected to [[said]] the common lines, having plural gate driving means connected to [[said]] the common lines, and having a wavelength conversion member in the photoelectric conversion element;

an electromagnetic-wave generation source;

image processing means for processing an image signal from the area sensor; and

display means for displaying an image on which image processing is performed,

wherein signal reading is performed, at the same timing, by each of the plural signal reading means.

Claim 26 (original): An image input apparatus according to claim 25, wherein a grid is provided between said area sensor and said electromagnetic-wave generation source.

Claim 27 (currently amended): An area sensor according to claim 1, wherein [[said]] each of the plural signal reading means comprises an amplifier IC having

an amplifier provided individually for each data line, and an analog multiplexer; and an A/D converter.

Claim 28 (currently amended): An area sensor according to claim 1, wherein [[said]] each of the plural signal reading means comprises an amplifier IC having an amplifier provided individually for each data line, and an analog multiplexer; an A/D converter; and a digital multiplexer.

Claim 29 (currently amended): An area sensor according to claim 27, wherein [[said]] the signal reading means comprises a plurality of [[said]] amplifier ICs, and the output of each amplifier IC can be selected and controlled in accordance with a select signal.

Claim 30 (currently amended): An area sensor according to claim 27, wherein in [[said]] the signal reading means, [[said]] the amplifier IC has at least two analog outputs of the even-number group and the odd-number group.

Claim 31 (currently amended): An area sensor according to claim 30, wherein [[said]] the signal reading means has A/D converters corresponding to the respective analog outputs of the even-number group and the odd-number group of [[said]] the amplifier IC.

Claim 32 (currently amended): An area sensor according to claim 31, wherein, in [[said]] the signal reading means, the outputs of the A/D converters

corresponding to [[said]] the even-number group and [[said]] the odd-number group are connected to the digital multiplexer.

Claim 33 (currently amended): An area sensor according to claim 30, wherein a second analog multiplexer for inputting and switching the analog outputs of [[said]] the even-number group and [[said]] the odd-number group is provided, and the output of the second analog multiplexer is connected to the A/D converter.

Claim 34 (currently amended): An area sensor according to claim 32, wherein the output signals of [[said]] the digital multiplexer or the second analog multiplexer is controlled in such a manner as to be positionally continuous.

Claim 35 (original): An area sensor according to claim 9, wherein the resistivity of a material for the common gate line is  $10\ \mu\Omega \cdot \text{cm}$  or more.

Claim 36 (original): An area sensor according to claim 9, wherein the material for the common gate line is one of chromium, titanium, molybdenum, and a molybdenum-tantalum alloy.

Claim 37 (original): An area sensor according to claim 9, wherein there is the following relationship between the time constant  $\tau_1$  which is determined by a product of the capacitance and the on-resistance of the photoelectric conversion element and the time constant  $\tau_2$  which is determined by a product of the gate-line resistance and the gate-line parasitic capacitance:



$$\tau_1 \geq \tau_2$$